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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,299	07/14/2003	James A. Shelford	UOBC121469	7570

26389 7590 07/13/2006

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EXAMINER

NAFF, DAVID M

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/620,299	Applicant(s) SHELFORD ET AL.	
	Examiner David M. Naff	Art Unit 1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14 and 16-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,8-14 and 16-26 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

An amendment of 4/18/06 amended claims 1, 3, 8, 10, 14, 16 and 21, and canceled claims 2 and 15.

Claims examined on the merits are 1, 3-14 and 16-26, which are
5 all claims in the application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1, 3-5, 8, 9, 11, 12, 14, 16-22, 24 and 25 are rejected
10 under 35 U.S.C. § 103 as being unpatentable over Block et al
(6,485,765 B1) (newly applied) in view of Ooshima et al or Helle et al
each taken with Oakes et al and Kung et al, and if necessary in
further view of Madamwar et al or Muck et al.

The claims are drawn to a feed additive for ruminant animals
15 comprising an amount of nonionic surfactant to enhance utilization of
a feedstuff, and a sufficient amount of antioxidant to enhance
oxidative stability of the surfactant. Also claimed is a method of
enhancing feed utilization by adding the additive to feed of a
ruminant animal.

20 Block et al disclose a feedstock for dairy cattle containing
macromineral ingredients (col 4, line 11) and may also contain an
antioxidant such as butylated hydroxyanisole (col 6, line 39-40) and a
nonionic surfactant (col 6, line 46). The feedstock may be in the
form of an energy concentrate or protein concentrate (col 5, lines 20-
25 40).

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Ooshima et al disclose enhancing enzyme hydrolysis of cellulose with surfactants.

Helle et al disclose that surfactants enhance enzymatic cellulose hydrolysis.

5 Oakes et al disclose adding nonionic surfactants to animal feed to control bloat (col 5, lines 10-11).

Kung Jr et al disclose fermentations involved in silage production which involve carbohydrases and proteases, and lactic acid bacteria.

10 Madamwar et al disclose using surfactants to improve the anaerobic digestion of water hyacinth-cattle dung.

Muck et al disclose factors influencing silage quality.

It would have been obvious to include in the feedstock of Block et al a nonionic surfactant disclosed by Block et al as an ingredient
15 that can be present to obtain the function of the nonionic surfactant to enhance cellulase hydrolysis of cellulose as suggested by Ooshima et al or Helle et al and to obtain its function to control bloat as suggested by Oakes et al since it would have been apparent from Kung Jr et al as to the function of cellulase in degrading plant cell-wall
20 in fermentation of silage when the feedstock is used in combination with feeding silage. It would have been further obvious to include with the surfactant in the feedstock of Block et al an antioxidant disclosed by Block et al that can be an ingredient of the feedstock to obtain the antioxidant function of the antioxidant. The antioxidant
25 would have inherently functioned to stabilize the surfactant. Kung Jr

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et al would have further suggested a lactic acid bacteria as in claims 12 and 25 when the feedstock is used in combination with feeding silage. When the feedstock of Block et al contains particulate ingredients as in Table 1 (col 5), the surfactant and antioxidant will inherently become coated on the ingredients when mixing ingredients together, and the particulate ingredients will inherently function as a carrier for the surfactant and antioxidant. If needed, Madamwar et al would have further suggested adding a surfactant to feed, or Muck et al would have suggested factors influencing silage quality.

Claim Rejections - 35 USC § 103

Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 3-5, 8, 9, 11, 12, 14, 16-22, 24 and 25 above, and further in view of Potter (4,405,609) (newly applied).

The claims require monensin as a digestion enhancing agent.

Potter discloses (col 14, line 4) adding monensin to a feed to improve efficiency.

It would have been obvious to add monensin to the feedstock of Block et al to obtain its function to improve efficiency when the feedstock contains a nonionic surfactant and antioxidant as set forth above.

Claim Rejections - 35 USC § 103

Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 3-5, 8, 9,

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11, 12, 14, 16-22, 24 and 25 above, and further in view of Itagaki et al (4,976,976).

The claims require a carrier that can be diatomaceous earth or silica for the surfactant and antioxidant.

5 Itagaki et al disclose (col 6, lines 4-5) silica or diatomaceous earth in a feed additive.

When the feedstock of Block et al contains a surfactant and antioxidant as set forth above, it would have been obvious to add silica or diatomaceous earth to the feedstock as suggested by Itagaki et al. The silica or diatomaceous earth would have inherently become coated with the surfactant and antioxidant when mixing ingredients together to form the feedstock, and function as a carrier for the surfactant and antioxidant.

Double Patenting

15 Claims 1, 3-5, 8-12, 14 and 16-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,221,381 B1) in view of Block et al.

It would have been obvious to include an antioxidant in the feedstuff composition of the patent claims as suggested by Block et al disclosing a feedstock that can contain an antioxidant and nonionic surfactant. The antioxidant would have inherently stabilized the surfactant.

Double Patenting

Claims 13 and 16 are rejected on the ground of nonstatutory obviousness-type double as set forth above, and further in view of Potter.

5 When adding an antioxidant to the composition of the patent claims as set forth above, it would have been obvious to add monensin to enhance efficiency as suggested by Potter.

Response to Arguments

10 Applicants' arguments that none of the references disclose an antioxidant in combination with the nonionic surfactant as claimed is unpersuasive with respect to the rejections above since Block et al suggest a feedstock containing an antioxidant in combination with a nonionic surfactant.

Conclusion

15 Claims 6 and 7 are free of the prior art, but are objected to as being dependent on a rejected claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Naff whose telephone number is 571-272-0920. The examiner can normally be
20 reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David M. Naff
Primary Examiner
Art Unit 1651

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DMN
7/10/06